

FIG. 1A

cagaaagaga cctatatgat caaatacaga ac	atg atc ttc ctc ctg cta atg	53
	<u>Met Ile Phe Leu Leu Met</u>	
	1 5	
ttg agc ctg gaa ttg cag ctt cac cag ata gca gct tta ttc aca gtg		101
Leu Ser Leu Glu Leu Gln Leu His Gln Ile Ala Ala		
10 15 20		
aca gtc cct aag gaa ctg tac ata ata gag cat ggc agc aat gtg acc		149
Thr Val Pro Lys Glu Leu Tyr Ile Ile Glu His Gly Ser Asn Val Thr		
25 30 35		
ctg gaa tgc aac ttt gac act gga agt cat gtg aac ctt gga gca ata		197
Leu Glu Cys Asn Phe Asp Thr Gly Ser His Val Asn Leu Gly Ala Ile		
40 45 50 55		
aca gcc agt ttg caa aag gtg gaa aat gat aca tcc cca cac cgt gaa		245
Thr Ala Ser Leu Gln Lys Val Glu Asn Asp Thr Ser Pro His Arg Glu		
60 65 70		
aga gcc act ttg ctg gag gag cag ctg ccc cta ggg aag gcc tcg ttc		293
Arg Ala Thr Leu Leu Glu Glu Gln Leu Pro Leu Gly Lys Ala Ser Phe		
75 80 85		
cac ata cct caa gtc caa gtg agg gac gaa gga cag tac caa tgc ata		341
His Ile Pro Gln Val Gln Val Arg Asp Glu Gly Gln Tyr Gln Cys Ile		
90 95 100		
atc atc tat ggg gtc gcc tgg gac tac aag tac ctg act ctg aaa gtc		389
Ile Ile Tyr Gly Val Ala Trp Asp Tyr Lys Tyr Leu Thr Leu Lys Val		
105 110 115		
aaa gct tcc tac agg aaa ata aac act cac atc cta aag gtt cca gaa		437
Lys Ala Ser Tyr Arg Lys Ile Asn Thr His Ile Leu Lys Val Pro Glu		
120 125 130 135		
aca gat gag gta gag ctc acc tgc cag gct aca ggt tat cct ctg gca		485
Thr Asp Glu Val Glu Leu Thr Cys Gln Ala Thr Gly Tyr Pro Leu Ala		
140 145 150		
gaa gta tcc tgg cca aac gtc agc gtt cct gcc aac acc agc cac tcc		533
Glu Val Ser Trp Pro Asn Val Ser Val Pro Ala Asn Thr Ser His Ser		
155 160 165		
agg acc cct gaa ggc ctc tac cag gtc acc agt gtt ctg cgc cta aag		581
Arg Thr Pro Glu Gly Leu Tyr Gln Val Thr Ser Val Leu Arg Leu Lys		
170 175 180		
cca ccc cct ggc aga aac ttc agc tgt gtg ttc tgg aat act cac gtg		629
Pro Pro Pro Gly Arg Asn Phe Ser Cys Val Phe Trp Asn Thr His Val		
185 190 195		

FIG. 1B

agg gaa ctt act ttg gcc agc att gac ctt caa agt cag atg gaa ccc 677
 Arg Glu Leu Thr Leu Ala Ser Ile Asp Leu Gln Ser Gln Met Glu Pro 215
 200 205 210

agg acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc tgc atc 725
 Arg Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile 230
 220 225 230

att gct ttc att ttc ata gcc aca gtg ata gcc cta aga aaa caa ctc 773
Ile Ala Phe Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu 245
 235 240

tgt caa aag ctg tat tct tca aaa gac aca aca aaa aga cct gtc acc 821
 Cys Gln Lys Leu Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr 260
 250 255

aca aca aag agg gaa gtg aac agt gct atc tga acctgtggct ttgggagcca 874
 Thr Thr Lys Arg Glu Val Asn Ser Ala Ile 270
 265

gggtgacctg atatgacatc taaagaagct tctggactct gaacaagaat tcggtggcct 934

gcagagcttg ccatttgcac ttttcaaagc cctttggatg acccagcact ttaatctgaa 994

acctgcaaca agactagcca acacctggcc atgaaacttg ccccttcact gatctggact 1054

cacctetgga gcctatggct ttaagcaagc actactgcac ttacagaat taccctcactg 1114

gacctctggac ccacagaatt ccttcaggat ccttcttgct gccagactga aagcaaaagg 1174

aattatttcc cctcaagttt tctaagtgat ttcca 1209

FIG. 2A

Cd80_Human :	180	160	140	120	100	80	60	40	20	*
Cd86_Human :	155	138	120	100	80	60	40	20	*	
GA16817596 :	134	117	100	80	60	40	20	*		
B7-H1_Huma :	143	126	100	80	60	40	20	*		
B7rp-1_Hum :	152	135	117	100	80	60	40	20	*	
Pro352_Hum :	153	136	118	100	80	60	40	20	*	
Btfl_Human :	157	140	122	100	80	60	40	20	*	
Btsf2a2_Hu :	141	124	106	80	60	40	20	*		
Bt4_Human :	154	137	119	100	80	60	40	20	*	
Btn3a3_Hum :	152	135	117	100	80	60	40	20	*	
Btn_Human :	152	135	117	100	80	60	40	20	*	
Cd80_Human :	224	207	189	171	153	135	117	100	80	60
Cd86_Human :	219	202	184	166	148	130	112	94	76	58
GA16817596 :	198	181	163	145	127	109	91	73	55	37
B7-H1_Huma :	219	202	184	166	148	130	112	94	76	58
B7rp-1_Hum :	229	212	194	176	158	140	122	104	86	68
Pro352_Hum :	229	212	194	176	158	140	122	104	86	68
Btfl_Human :	233	216	198	180	162	144	126	108	90	72
Btsf2a2_Hu :	217	200	182	164	146	128	110	92	74	56
Bt4_Human :	230	213	195	177	159	141	123	105	87	69
Btn3a3_Hum :	228	211	193	175	157	139	121	103	85	67
Btn_Human :	228	211	193	175	157	139	121	103	85	67

Cd80_Human	300	*	320	340	360
Cd86_Human	300	*	320	340	360
B7-1_H1_Huma	300	*	320	340	360
B7rp-1_Hum	300	*	320	340	360
Pro352_Hum	300	*	320	340	360
B7f1_Human	300	*	320	340	360
B7f2a2_Hu	300	*	320	340	360
B7c4_Human	300	*	320	340	360
B7n3a3_Hum	300	*	320	340	360
B7n_Human	300	*	320	340	360
Cd80_Human	380	*	400	420	440
Cd86_Human	380	*	400	420	440
B7-1_H1_Huma	380	*	400	420	440
B7rp-1_Hum	380	*	400	420	440
Pro352_Hum	380	*	400	420	440
B7f1_Human	380	*	400	420	440
B7f2a2_Hu	380	*	400	420	440
B7c4_Human	380	*	400	420	440
B7n3a3_Hum	380	*	400	420	440
B7n_Human	380	*	400	420	440
Cd80_Human	480	*	500	520	540
Cd86_Human	480	*	500	520	540
B7-1_H1_Huma	480	*	500	520	540
B7rp-1_Hum	480	*	500	520	540
Pro352_Hum	480	*	500	520	540
B7f1_Human	480	*	500	520	540
B7f2a2_Hu	480	*	500	520	540
B7c4_Human	480	*	500	520	540
B7n3a3_Hum	480	*	500	520	540
B7n_Human	480	*	500	520	540

[illegible]

ataagaagct	gaattaaggt	gatggcagtg	gggtggaaga	aaggagagcc	accatgcaaa	60
aagtatccag	gagggagaat	taacaggact	aggggatggy	ccatatttgc	aagatgagaa	120
atgcagaggt	ctaagattct	agctnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	180
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	240
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnngcataaac	300
catatttttc	ccagaggagg	attagttaga	aaggaaagctg	ctggttgtaa	agtatcttta	360
tagcagtgtc	tgttctctcg	ttgtctcaag	gggacagtg	gccaggaaa	tcgccgtgga	420
agggcaagga	agaaggggaa	gttaaaagcca	gtggcagggtg	atccaagaat	ctttcttgtt	480
gctagagcta	tgttacatgc	tgtcctttca	tgctctaaaa	ataagagtgc	tggcaagtgc	540
caggcctgtt	ggtgcagctt	aagatgatac	ctttcttgga	tatatatgca	tctgaataag	600
gaaggctatc	ttctgggtcaa	gctaagggtat	gccatgagca	ttccctgtgt	gaaagcactt	660
aattctgttc	ccagttgtta	cctgctgtaa	gatctccctt	tctaaaataa	aaacaagaat	720
acagctcact	gaggacctta	catttcacct	tagctactga	ctcatttctc	ttctcctttt	780
tatagcactc	ttcttggagag	agttgcctat	atttgttgcc	acatctttac	ccattctctt	840
ttgaacctat	tcaagctttc	atctgtacaa	aactcactga	tactgtgctt	gtcaggatca	900
tccatgacct	ccatactgct	aaatgcaact	ctcaagagta	tttggtctta	ctgatcactc	960
ctttgtagca	ctgtgtttta	aaatataggt	tttattatta	tttaggtatg	gtgaggccaa	1020
tatatcagga	aatgactgtc	gttgaaaaaa	gtatgttgta	ctcacagatc	ccaagagaag	1080
gggggacac	catgccacaa	agggccacat	ggggaagcac	cagggtcagc	caggaggtgg	1140
gtgggggggtg	cgcaagatct	ttatttgtgt	ttcaacagga	agaaatgggt	gaagcagggt	1200
gagtggattt	aggattagct	gataataata	atttcagcag	gctctggggc	atagggggctg	1260
tcctagtct	tctgtgtaact	ggccctgggg	tgattaaggc	agttgcatag	tgttgggaat	1320
gtgaaagccc	ccaataaatg	aggcagttgt	gggtatgggc	tctgaaatgg	gttggtttgc	1380
atttgaagg	tgtgctcatg	ggcaagtgg	ttactctctc	ttagagggtta	gaattggcta	1440
accctgggag	cggcagctcc	ttcagggtca	gcaaggcccc	aggtgtcaaa	gcatacagaat	1500
acagaaaaata	aaatgcattg	ataatacaca	ctgccatttg	cctttgtacc	cttcctttca	1560
atcttctctg	ctggtgacgg	ctcttcacaa	agatctataa	atgttggaat	accccatgtc	1620

FIG. 3C

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3300
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3360
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn ttgtgtttaa 3420
 aatatatata cacacttaga cacatataac cctctttcgt atatcaatta tactttaata 3480
 aagctgttgn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnctcgcca 3540
 acagaccact tctcacccct actagccctt ctactctaag ctatcagcat ttctgcaaac 3600
 acattcceta ccgatctcac tgcttgtaat ctggcagca acctctccct ctgagcaata 3660
 gtctattgcc tacaccaaag cttagtgtgc tcttaatgat gtaaatgagg ttctatcatt 3720
 ctctcgacce aaacctcca ctgcttttca tcacactcag agcagctctg ctgttgccctg 3780
 atttagatgt atggctccaa cagatttccc ctgaagaaat gattccatgg ctgataaaaag 3840
 ttggaagacc tctcagttt cagaccatta tcagattagc tgtgtgctct gtccctttcc 3900
 tcaaccataa gaagtccatg gataaagaaa gcttcagagt aaaggagaaa gcatgggagg 3960
 tacagcagga ccaagtgagg gcattcgag cccccacct catcagagcc agttccctac 4020
 tctccctgtc taaacctett agtaagaggt agttcaagag agggggcaaa tcaattccag 4080
 cactcaaaa cacttgacta ctttgctcag tcaactagca agtatttatt gagaatgtag 4140
 ctctgttcta tggagtetta ttttcaagt tcagactccc agacatccag tccaggtaaa 4200
 gaagatgggtg tccattattc atttgacaaa caaagttggg gttcaagggc cagctattga 4260
 aaaaagctat ggaaagcttc atgagacgtg caggtaactg ccaatatgtg tggttcacaa 4320
 ggactggttc atattcagaa acggccatta gaaaaggaag aagaacttct catttggtat 4380
 tataaagagt gtctgtttaa ctcttaattt atatcttctc ttctccagga aatcaaccta 4440
 taactttcct tcccagctcc actctaccat ggtctgtcac ctccccaaa tgatttgtaa 4500
 ttccccctgtt ttcaaaagtg aacaaagaac caaagaccga gcaaagtttc acaaggccct 4560
 gagactttca attgtctatt tcagatcaaa tacagaac atg atc ttc ctg cta 4616
 Met Ile Phe Leu Leu Leu 6
 atg ttg agc ctg gaa ttg cag ctt cac cag ata gca ggtaagaaa 4662
 Met Leu Ser Leu Glu Leu Gln Leu His Gln Ile Ala 18
 gacaaagggg gaggtctaag aaagaagagc aggtgggtgt tctagccaa agccaaaat 4722
 gagaatgtgg ccctcaggct gagggcttcc tttagagagga cgtatgattt ctgggctatt 4782

FIG. 3D

coaagcacca caaaaaaaaaa aagagtcgcc atggtggcct atacatgcc atgtccctat 4842
 ctgacagaaa cggtgactga gaatattgct ccatctatcc ccactatcca gtgagggtaa 4902
 tgacaagaag acaggatcac tcagaccatg taaatctaaa ctgatacaag agggcagggg 4962
 ttgagttccc ttaaagggtga gatgccaaag agctgtcccc ttctttcttg gcaggagagag 5022
 taaggagaca atggccagggt aacaccgtta ctctaaagat aatgtcttga agacattctg 5082
 catattatta gttgtttctg tgagtttctt ttttgaaaag caacaatagc agccgttggt 5142
 cattcatacc ttaatgtgtg ttactgagtc ttctctaaac ccaaatgaac aatgaacctt 5202
 aaggctatcc ctttgactgt gaagaaagga cttctatttg aggatgaggg tgagcagaaa 5262
 gaaaagcagt ttcacagtgt gttgttctcc tggggaagggt agttcagacc attcgaggggt 5322
 gtagttagaa ccatgagtgc actatttttg atgaacacca ggagctaaag gagtaacata 5382
 gaggtgtgga cagaggatta agtctcctcaag acaatagccc cagcccatgt ggaatcatc 5442
 tttctgtcca tgattgagaa ataattggctc cettggcact tgataaccct tcgaagagct 5502
 ttctctcccc tactagctgg ttcoagatca ctcttcaccc agtcacattc ctctcactca 5562
 cttgagctgc ccagcctggt ctggcactag agacatgcac ttggggccct cctcaaagga 5622
 agaccctgag atattctgct tactttctact ctgctctctc ctgcagggcc agctaaagga 5682
 acttttcatg ttttctttgc aaggaaccct gcctggctgg catttttagag acaagcaaaa 5742
 ggggcaataa cttccttgct acaaaacagc ttcaagtttc catagagtga taagggaat 5802
 gagggccaaa agacactgtt ccccatcctg tggcaggact gggggcttca ggagaaaact 5862
 tggggaatgt gtaacctctg tgggtttgta gcttaaaaac actgagatcc tgggttttct 5922
 gtctttgttt tttgcctttt ctcttaggaa aggagtgagc tagggtgaca aggggcaaca 5982
 ttttttatcc ctcatgggtt cttctctacag aggaaggatc tttctctcta agataatcag 6042
 cacaagacaa tgaagatagg cactagctcc cagttaggta tactaatggg gcaaaaggaa 6102
 gageattttn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6162
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnattttgca ggtgaggga ctagaactca 6222
 gaaaaggtag ttaatttccc caagattaca tagttattag gtgacaccgg caagatttca 6282
 acaaagctaa tgtcctttct actttactgt gctaccatga tgatggtaat caaaaatggc 6342
 agacaaccca taaatcttcc aactttggaa taggtttttg cactgaagtc tgaatatgga 6402

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 100

FIG. 3E

tacgtattga atgtttattc tggatattca cagaatcaaa aaatatgtgt aatgaattat 6462
gttgctgaat taactgaaag gaaagtaaaa atgtagcgtt ttctcatttt cttcacgaat 6522
ttggaattct tttctgcttt ccactatgca gataacatca gttcagacaa atattaaata 6582
cctacctaaa ttagaatgcc ttctcctcat gggatttttt taaaaatctg tcatttcattg 6642
ttctctttaa taaagagttt tgatttcaga ggagggtacc tgcaaaagaa aacaacaaaa 6702
aaactaaagg atctgagaaa taattagtgt ttacttctgg ggagggggagg aggtctggga 6762
tgggggtaaa aaggatagtc ttatctatta tgtatatcca ggtttttgtt ttttacaaga 6822
agcatgtatt aggnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnca agaaatttct 6882
catataaaaa tatgaaagta atcagactgc aacactcagt gcctgagaca gagctacagc 6942
tatcagggtg tccagacaga cagaagatta cattttcttc ctgtctcctt gtacagcccc 7002
agacctgcgt gcttcattga aaagaaaaga agatacctga attaaatcaa tgtgatgctt 7062
agtaccctat cagtgcacat ttcttttcnn nnnnnnnnnn nnnnnnnnnn cacttnnnnn 7122
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 7182
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 7242
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 7302
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 7362
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 7422
cttatggcgg tattctcagt cattacaaat aaataaaaac aatccatatg ccctggagaa 7482
tttgattcca ggagtaggtc tagaagaact tcaactggag aatggataga gaaatcatgg 7542
tatatttgca gnnnnnnnnn nnnnnnnnnn nngatagca tgtgaataaa ttaattacaa 7602
aaacatatga ctacatctat tattatatag catgtagata aattacaaaa acatgtaact 7662
acatctatga atcttagagc ataattatga gnnnnnnnnn nnnnnnnnnn nnnnnnggcc 7722
agaagataac acatagcaca atgtcctttt cataaataaa tatattgctt aagcatacct 7782
tatatataga agataaagct taaaaagtaa agaagag 7819

6462
6522
6582
6642
6702
6762
6822
6882
6942
7002
7062
7122
7182
7242
7302
7362
7422
7482
7542
7602
7662
7722
7782
7819

FIG. 4

attatcactt	atgagggtgn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	60
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	120
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnctgcc	180
ctttattttt	tcatgaaaga	aattgctgaa	gaggactaaa	agaagtttta	gtaagcattc	240
aataaatgta	tgttctttat	agtttccaaa	tcagcaaata	tagacatcct	gcatttttaa	300
ggagatttat	atatttttat	ggacatgctg	taattttatt	aaccactttc	ctgttggtag	360
acattatttc	cattttcttc	tgctagatta	atgcttgaaa	aaaatgtgtg	cctcctaaga	420
actgtgatga	aagttgcctc	tgaataaaac	tcaaacaaat	cattaatcat	taactctttc	480
cttacttgta	tgctctttgg	atgctctact	gtgttatcta	taaaaataag	tttgaagtga	540
aaaattaggy	taaaacattt	tatatcattt	ttaaaggata	tatacatgga	tgtaacttaca	600
tatgcatggt	taaatttata	taccataaca	tttattttct	tttttaaaaa		650

[illegible]

FIG. 5B

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnct tagtgaatct aatttgcagc 1680
 tgggcttgag aaaaaacctc ttcatagaat tgtttgcac agtgtcttga ttgcctctgt 1740
 aacttacaat aagcaagaat gtttcaggat ttcaaaaatc tattgcattg cctaaacctc 1800
 ttatttttga tggagtaatc aagctcaaag tttgcatgct ttagaaactt tacttggggc 1860
 aaaattagac caagtaacaa ttaatcttct aggtattctg agctattcag acatatgatt 1920
 catgtttgct aattgtctct ttctcttgta aatattagct gaaaaatgct acctgtctga 1980
 caagtagcat attttatgcc tatcactcct ggcacgcatt cttacaaggc agacaggaaa 2040
 aataggaaga aaatggactt ttatcaaagg cccaggcagt aaagagggga gttctgctgt 2100
 aagctaaggg gagttccaga ggaagtata ggcgttccct ttcttatgac aagaagcat 2160
 agtgcagtaa ataaatttgc taaatagatt caacagtcct taccctaaagt catctattta 2220
 attcttgttg ttatgcagac tcagcaacta acctctcttg taagccccat ttctctccct 2280
 gtttctgttt tatcaaatgt aattaacaa gagaagtatt atagaagagt aaaagtagta 2340
 ggtaattctt gaacttgcca tatgattact acatatattga tgaatagttg aatatatttc 2400
 ttcaaggaca gattggattt ggtatcaggt ggctctgcac taagtataa gggacttaat 2460
 aactcaagta tttaggagc gcttccatca taaagggatc tgcccttaag aggggtccat 2520
 tatggagatt ctgaggtgag agctattcca agtgtgcagt ggattaaaaa aaaagaatca 2580
 tacaggaat ctctttttac atgccttatt ccagggtctt tgcaacctgg cacagcaagt 2640
 gcagatatga ttagcattgt ttacacatg tacactcacc ttatagccct gccctgtgac 2700
 ccctctgca caaaagaatg ctgggcacac gtgaactcct ctctgtagaa aggcacatta 2760
 atgttctagc catggttaaa acagggatag aggcaagcca aaaatgtcgg tcatttgaaa 2820
 taaatctcaa gtttgtgcat atcactatca agtgtgtgt gtggcaatta agaatgcaa 2880
 tttgtgtgat cacaggcaag ttgcagtttg atgaaaggaa agcagagggt aatatataac 2940
 cagggtcac ctctctctct cctctctct ctctctgca ttattttgcc aagctcttaa 3000
 ctagaacttg ctatgtgcta ggtactggat atatcaaagc aaactcagcc tggctcttgc 3060
 cttcaaagat ttgcaggata tggggaagaa aaacttgaat cagaggacat ctgcagtggt 3120
 aatcattcaa gcagcagaaa acccaaaagt tacttatact gtgaaatctg atcagagaat 3180
 ggactgtcct ggttagtaaa atatcctgga ggataaagat tggccatgca ttccacatat 3240

FIG. 5C

gaattaccac tttccaaga attaaaaacat ggtacgaaag aaaggnnnnnn nnnnnnnnnn 3300
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3360
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3420
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3480
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnna aacaacttct 3540
 ggaatagcta atgcttagaa gcagctccca aatatttgt nnnnnnnnnn nnnnnnnnnn 3600
 nnnnnnnnnn nnnnnnnnnn gcaagctcta ctgaacataa tttgatctaa tcttctgtga 3660
 ttattcagaa actactcaa gattttccta tacctccatc ataataaata cccattcatt 3720
 aatgatggaa gcagccta atgtgtcattt ttcacacttt attgatgtaa cactaccttt 3780
 actagtgttg ccactcctta tgcctttttt atagaactat ttagatcaat tcaactttta 3840
 aaaaataaag ccacataccc ctgtggtaga tgaaaaacaa gtatcatttg cactggtaaa 3900
 tagagaatag gaagaaaaat aaatgcagtg aaaataaagc agtgttatca aatcctaccc 3960
 agatactgtt atctacccgg aagcttcctg tttgattaaa aggaaaaata gccagtgtta 4020
 gaggtgtgga agtctagtgt aaattatatg caattgaagg attaaaatag aattgaaaag 4080
 ggaataaatt cctctctgaa taatttaact cccttttaggc tttgattctg cctcatctaa 4140
 aatcatctta catacttcta gtggcgtgtc cctcacattt tggtaaaact tgnnnnnnnn 4200
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4260
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4320
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4380
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnccat ttttcttctt cctttattgt 4440
 cagaaaaatg aaagcatcta cagtgggctt gtatgatgtg gtggttagaa atacctgac 4500
 tgattnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4560
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4620
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4680
 nnaccatcac tggtagagag aagtataacc tggcacaaaa atatattgat taatcaatat 4740
 ggattgaggg aaacaaacct ggagaatagg atgtgaaggt atttaagtaa catgagctca 4800
 gacctgatg gtagggaagt cgaaaggaag cattttgttc ttatatgaca gatgacctgg 4860

FIG. 5D

aatgactgca gggcttgagg ggtcaggagc tggaggtggg agaggcctct gagagcaagc 4920
 agtgcgtgcc accagaagct cttgctgggg tccccagaga ggagcaaaag gcagtcagct 4980
 gcacaggagg gaatgtttgg aggagagagc cacctcagat cagcgggtca agaatccac 5040
 tcttgcccag atggatgggg caaaggagaa aaaggattcg ccacgggaat gtccagataa 5100
 gacaggtgcc ttttgaaaa tgggggtgag atgggtctca ggttacactt cgtaagaact 5160
 ggaatgtaaa gtaaaaggcag acaatgacaa aatatcttgt tttcttttca gct tta 5216
 Ala Leu 20
 ttc aca gtg aca gtc cct aag gaa ctg tac ata ata gag cat ggc agc 5264
 Phe Thr Val Thr Val Pro Lys Glu Leu Tyr Ile Ile Glu His Gly Ser 36
 aat gtg acc ctg gaa tgc aac ttt gac act gga agt cat gtg aac ctt 5312
 Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser His Val Asn Leu 52
 gga gca ata aca gcc agt ttg caa aag gtg gaa aat gat aca tcc cca 5360
 Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn Asp Thr Ser Pro 68
 cac cgt gaa aga gcc act ttg ctg gag gag cag ctg ccc cta ggg aag 5408
 His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu Pro Leu Gly Lys 84
 gcc tgc ttc cac ata cct caa gtc caa gtg agg gac gaa gga cag tac 5456
 Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp Glu Gly Gln Tyr 100
 caa tgc ata atc atc tat ggg gtc gcc tgg gac tac aag tac ctg act 5504
 Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp Asp Tyr Lys Tyr Leu Thr 116
 ctg aaa gtc aaa ggtgagtggt gtcaaggact agaatccatg gaagctctct 5556
 Leu Lys Val Lys 120
 ccaacagagg atctgcaagt cacagaaacc cattaagggt agctcaagca aaaacaagca 5616
 ggctgctttt aaggagacag ctatttcaga gaaatgaaa gcactctgctc ggaataatt 5676
 ttgacatct gagtacaaag cagccgaagt acaagtgaag gggggtaggc cctataggaa 5736
 taaaatggga ctggaggaag ccaggaaaat tagtccctga aatgtgggag ggtatgaaaa 5796
 ataagctttg cctaattcac aattctccca tggaacatcc ctgacttgat tattaagata 5856
 ctctttttca atagtttata ccctgaatcc agagttttta aaaccatggt ttgcccacca 5916
 ttcatggatt aaaatatcaa tttagttagt agcaaccaga tgcacgttcc ccgccttta 5976
 aaaaataatg tatagaagag aatagacaga gtagatcaga cgatatcaca gagtaggact 6036
 gagtactgta aaactaattt ctgaggagcg tgtgtgtgtg tgtgcgtgtt gggtcatggt 6096
 ataaattttt tttttcttac tttggatcat aaaaagttac aagtttgtaa aacactgctc 6156

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FIG. 5E

aaatgcaagn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6216
 nnnnnnnnaga gtcccatgaa gtctatagct gtccctattc ctctggatcc agggatctct 6276
 ccactccagc acaattgaaa atctaataat aaagagaatc ttcacactct tgtttgttct 6336
 agaaaagggt atttgaggaa agacatataa caactataaa aaatagattt tgcctgttca 6396
 ttggtcttatg gtctccaggc ttgaatgctc tgagataaat gatgccaata tttctctggc 6456
 ctcttcccat ccacagcatt ggacctcaga tggctctgtac tgtcttctag aggggtttgtg 6516
 ggttttggcc ccaaaaaacc attaaccttg gcagaaagtg tgtgacttta tgatctggta 6576
 caaagaagga caaactagag ggactggaca tgaggatgaa tattgtgttc gcccttatnn 6636
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6696
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6756
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnaaa gaccctcagt 6816
 tgttacaggg gcagtgacct cctcacacct caaccatcaa tgagtcacca ggaaagccat 6876
 tagcctagat gtaactgttt tctatcttta ttgcatttcc tacatccagg cagcagctgg 6936
 gaggaaactct agaacactga agtttgtctg agttccctta atgtaaggct gtacattctc 6996
 aggatgcctt gatgtactcg aatatctgca accctaaatc accacctctg tttttattga 7056
 tctctatctg aatgctgtat taatgggcca ggcccttctg ccattctctc aaactgagaa 7116
 ctgtctctca ttccctggga ggcacctgct ctactcetta cctagatcag ggatttctca 7176
 gttgtggaga gatttgttcc ttatagtgtt ggtcatcaaa ctgggatatt tggggattac 7236
 aaagactttt caagggatgt atgggcacag gcagtttagt gaagtgaatt cctagatcct 7296
 catcttcccc aaatactcgt tcccaaaatt gacgagcctg acaatgtgca tgccaggcaa 7356
 ggctcttggg gtcccccata aacacttctt cttttaagcc taccactcac tcatcatgaa 7416
 tatagccat tgtcccaggg tgtaaaaccc tctatagtgt taaataaaag aatgattggg 7476
 aacattgaca cctgatggaa ctgttatgac taaaaaccc tttgcaata atgtggtatc 7536
 taattttctg ctttcaacaa aattgaagga ggcccttata aagttaataa ctgataatca 7596
 aaaatgagta atttttgcca tgtaaatcag gtcaagaat gaaatggcat tgctgtaacg 7656
 aaactgcttc cattccatt gatttactca tacgaacaag attccttagc ctttataagc 7716
 tacaaaaaaa tgaaaaatag aaatagaatt gaggctgaat tctattatat aaaatcattc 7776

FIG. 6A

tagatctcag ctttcttgag gcaggagacc atatctgttt aattcactca gcataactg 60
 caaagaagca gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnta 120
 gggagaagtg cagaataaat ataccactt ctttactatg tatagacatt atctaggtct 180
 ttattttttt tcttcttta atctcaaaga aaacagagga aaggaggaag taaaagtaa 240
 atttttgcct gaagatgttt ggaaaaata ccaaataaag tgagatagtg ggtaacttag 300
 tgatttttat ttttcctgcc tctttctggc ctccaattgt gaaataattt atagcactgt 360
 aagaaagaag ccacaaattg tggtagcttg gaccactgtt gaggnnnnnn nnnnnnnnnn 420
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 480
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 540
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 600
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn acttaattt gatagtata attttattca 660
 ttccacatgg catgaagtac caagctctat aggaatcaga aaataaagtc ttatttcttt 720
 ttcttctcta ttgtcca gct tcc tac agg aaa ata aac act cac atc cta 770
 Ala Ser Tyr Arg Lys Ile Asn Thr His Ile Leu 131
 aag gtt cca gaa aca gat gag gta gag ctc acc tgc cag gct aca ggt 818
 Lys Val Pro Glu Thr Asp Glu Val Glu Leu Thr Cys Gln Ala Thr Gly 147
 tat cct ctg gca gaa gta tcc tgg cca aac gtc agc gtt cct gcc aac 866
 Tyr Pro Leu Ala Glu Val Ser Trp Pro Asn Val Ser Val Pro Ala Asn 163
 acc agc cac tcc agg acc cct gaa ggc ctc tac cag gtc acc agt gtt 914
 Thr Ser His Ser Arg Thr Pro Glu Gly Leu Tyr Gln Val Thr Ser Val 179
 ctg cgc cta aag cca ccc cct ggc aga aac ttc agc tgt gtg ttc tgg 962
 Leu Arg Leu Lys Pro Pro Pro Gly Arg Asn Phe Ser Cys Val Phe Trp 195
 aat act cac gtg agg gaa ctt act ttg gcc agc att gac ctt caa agt 1010
 Asn Thr His Val Arg Glu Leu Thr Leu Ala Ser Ile Asp Leu Gln Ser 211
 aagagctgcc ccacttccct aggtctatca gttagggttc agacaagaaa cagatggcat 1070
 actcgagtga ttgaggaga gtgtaataaa gggactgttt acaaagggtg gatcaccatt 1130
 tgagaaact acaaaggata gtgcagaaca ctggggcttc aatgttggga gggaactac 1190
 cactgttga gaagtactg gaatcagaag gagctgtag ggaaagccc acttcccagg 1250
 agctgtagcc acagaatagg gaagctgcca catgcagcga ctccaaaggg tggaaactgg 1310
 atgaatgaat accccaactc attctctccc caccctccaa tctctgcta gcacctccca 1370

FIG. 6B

ttggctgaac ccagctagaa gtcagagaat acaaggggcc actgttgat tccataaaag 1430
tcaacttctc agggctcaga gcaatattga catgtacaga atagatctgg agaggaaaca 1490
gaaaatatct agtacaatag ctaatcactg tgattcatgc acagtgtcat gagccagcag 1550
gatgaatatt cctttgctgt acttgctgcc agtcagctgg ttatgggttt ttccaagaaa 1610
tttggtctct aacaaaattc ttcagagcct ttactgacta tgctggatat tttggaagg 1670
gatcccatatc ttttgaactt catcacagcag aatttcaaac aatcttgga aaataacaac 1730
ttttatctgc ccagtaagga caactaacac ctagtatcat aatcatttcg taagagacag 1790
gtaatttcat caccgagtgc atat 1814

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[illegible]

ctactgagaa	gggatatact	ctcagactaa	aggacagtc	ctagtactga	ttcaatctgg	60
ctttatagaa	aattcactat	attgtcattg	tatttcacag	tttgcccttt	gtcttagctg	120
gtaagacaga	gcctatgata	aggacttgtg	tggcatgcag	gtatttaatt	ggcaacccca	180
gagggcagaa	gcaagagatt	taggagttta	agagagggta	atataagagt	atattatcaa	240
agttgtatg	tggacaacag	aaactcaaat	attcaaggac	cagcatgtag	acagcctcct	300
aagatgtcta	ctcagacaaa	gaatttcagg	tggaaggact	tgttcatctg	cttcacgccc	360
attggtgtac	aggaatatga	actccattct	gctgctgggc	tagacatgca	tgtgggctga	420
gtgagcttcc	cccagtatcc	gtagcatcag	aaaagtcgca	gggcagaaa	aaaagtatcc	480
aatttgaggt	gaattactga	ccttgaagtg	agtgtaagcc	taactagaat	tctacccag	540
ctggctgaag	tgaagggtga	ggctgagagg	aaataaggca	ggactgcaca	gtcccaatt	600
gtactgttca	aatccactca	tgcccttcac	taagtcagct	ctgccactga	gccttccagc	660
tgggaggcag	ccacaatctc	tgcagaagat	ttaatataca	ccagtttgtg	gaacaagctg	720
tnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	780
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	840
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	900
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	960
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	1020
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	1080
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	1140
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	1200
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	1260
nnnnnnnnnn	nnnnnnnnacc	tgcagcactg	ggatagccct	ggtagacagc	tagaacatgc	1320
ttgaggaggt	tgtcaggagg	aaatgagtta	gaccttcac	agaactacca	ccatcaagta	1380
cagttggggt	gaggcagaca	tggtatgagt	tgaggcatca	gagatatctg	atgctttatg	1440
ccaaattaaa	attaattttt	tcattggagt	acactgatcc	acagaccaga	ctccaagaac	1500
tttgacgtga	ctaaataccc	atctcatcat	aactttctct	gtattttctt	ctggaaaaaa	1560
ttcttccctg	atacagtttt	cagaggcagc	tagatgcact	gtcatctctc	cccttttccc	1620

[illegible]

FIG. 7C

gttccctttc tactcattct cataaattga gctgtggact gctgtgaccc acaagcttct 3300
 ccggaagtca atgtataaaa caaacacgga aacgaagagt atggtgggtg gagggtactc 3360
 cactgactct agaatggatg actgaacatt ccaaatttca agcacaagtt agggagcaac 3420
 agatcatttt ccttttgaaa tagggtttct tctgctcagc cagttgttgt attttcatta 3480
 ggaaatggaa tgggactaca gcacaaaaaa taaatataaa aggacccttg tagggctggc 3540
 agaaaagaga atccttctca ggagacctgg aggtgattcc aggcnnnnnnn nnnnnnnnnn 3600
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3660
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3720
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3780
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3840
 cttgtgagtt catgaagttg tggcaaggat aagacaaata ttttttgcca ttgcatcatt 3900
 atatcattgc taagagtatg ccattattnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3960
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4020
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4080
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4140
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4200
 nnnnnnnnnn nnnnnnnnnn nnnnttaatt aattaaatta aagaaacgac aaaagagtat 4260
 gcaagaattt taaaacaact tagaggaata tgtatgagga tacaggctaa gctaccataa 4320
 tgaagagacc tcgaaataca gtgagaagcg agacagaagt atctttcggt ccatgtaaca 4380
 ctgagtggtg tcagagcagc taagcagcta tgttccatag agtcattcag tgatccagat 4440
 tattttcatc tgttgctctg ccattctcca ggatgtgtc cctataaaat tgtcaaagct 4500
 cagtcagtgc caaacccatg tttcaacctt cagaaagtaa acgagtggtg gaaaacacat 4560
 tcaatgtttt aaggccaaga ccttgaaaac tcactctctt agcctgaact tagattacat 4620
 ggctggggcc acttaactat aggggaggct tggaaacata gtctctgaga agccatgtgt 4680
 ccagctaatt ccctaatact aaagttgaaa gaaagaatgg attaaccagc agtataccac 4740
 aaggttaaca atgactagga ggatcaggct aggtggacta gaaaagagac agtcaattca 4800
 gtgcaacaat tccataattga cacttttcat gttagctgtg cttggctcta tctagagagg 4860

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

actcagagggt	agtttagata	aggccctttgc	cctccaataa	cagtcctaagc	agactgattt	4920
cctactggat	gttcaacttt	ggagctcttca	gggatgagta	gggcttctgt	acgtggaaga	4980
gactatgagg	gaacctgcac	aggacaaagg	tttgcataaa	gacactgagg	tagggacctc	5040
tcctgtttgt	gggacagtga	gaggcccagg	tctccttgac	tcacaaagtg	cttactaagc	5100
acttactaga	aattaagaag	cagattataa	tcaatatggg	ttatccaatg	tttggatgag	5160
caaggctcct	tatcttttct	tcgttaatgt	taatcacact	cttttgatg	gagacaaa	5220
tctgtggggg	ctnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	5280
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	5340
nnnnnnnnnn	nnggctcaga	ctaaataatg	tctaactctc	tctccagtaa	aacaatccgt	5400
ggttctcaga	tagcactgtg	ctggaggtag	tggggtttga	gggctgggaa	gttggggagg	5460
ctgagccctt	cccgctgagc	agtttcgtcc	agtttttctc	gtaccagcct	gtcatgttta	5520
ttccatgtga	atgactccag	aggcaaaatt	caagcttttg	aatagggcac	aaattaactt	5580
gagtaccctt	tcatttcctt	gtaggtgaa	actcctctag	cctgcctttt	tgtcagctctg	5640
gagcccttgt	tctaacttgt	acacaccaga	ggacttttga	aggctttccc	aggcctccag	5700
aattattctt	ctgatccacc	ctctactaaa	ctcacccttt	cctcagtgct	aggacgttga	5760
aaaaccgaaa	caaggcaaag	ggccaattgt	aataattcac	actaaggcat	gagtgaactg	5820
gttttagata	ttaaacttac	ctaggatatt	ctatttcttc	caaaagggatc	ctgttaatcc	5880
ttgaaattta	acaactaatg	gtatagattc	taagcactgt	gagtacttgt	cagtggggga	5940
aagacatttt	tgggctgaga	gactttgcc	ctgnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6000
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	aagaaagatg	attagatnnn	nnnnnnnnnn	6060
nnnnnnnnnn	nnnaaaaaat	aacatgagag	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6120
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6180
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6240
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6300
nnnnnnccac	gagctagccg	tgttggtgt	caccactca	tgtggccagc	ctgttggtct	6360
acctcttagt	tgccatgtaa	caggattctg	gtgcttttcc	tttgccagg	t cag atg	6417
					Gln Met	213

[illegible]

gaa ccc agg acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc	6465
Glu Pro Arg Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser	229
tgc atc att gct ttc att ttc ata gcc aca gtg ata gcc cta aga aaa	6513
Cys Ile Ile Ala Phe Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys	245
caa ctc tgt caa aag ctg tat tct tca aaa ggtaagtgtg tttatttcatt	6563
Gln Leu Cys Gln Lys Leu Tyr Ser Ser Lys	255
ggtaacccaa tgcactgggt gtctgacga tgagccactg ctttgactg caggcctatg	6623
gcttgctgct ttcattgctaa acccactcag agcttatgaa ccactttgag cttgtcttga	6683
tgattatttt tcccagaag aaaatggctc tcactgtcag tgagctgaac tctttacact	6743
gagtttttta aagggaatgt tttgtcttta tgtctgaaag agtttgtctt attcctttg	6803
ccaagagctt tcactagcct catgagagtgt atgttatttt ggcaatgcag agagctactgt	6863
gtctccgattt tgcgtggtggg aggttgccag gatcctttct gaggattcct tccattttca	6923
cccctctttt cccagctctg gatatgacct gggttaaacc caccctctct cccaggaate	6983
tcaacctcac ggttggtgtaa ggaaaggaga aaggtttgtg aggccatttg gggataagga	7043
aacagctggt tgggtggtgca ttaactgctt tcagcagctc ccttcgagtt tctccttagc	7103
ctgttgtatt cttaccaaca cactcctggt ctgttgtacc agctgggaca gagcatgctg	7163
aagcctttca gccctgattt cattgcttca ttgttcatgt gctcgtcttt ggtttcctgg	7223
gtggagcctg cccacaaaac ccccgaaatg tatgcaggcc tagctggtgc tttcctaaac	7283
ggctcccttg tctgactca atgaacttct ccaaagatct atacatggcc tcactctatg	7343
aaagagaaat gacatgtgga aataattcag taggagtttg cagcagcact atctgaggac	7403
taggggaatt ttaagtgttt gttatcttac atttatactc ataacttcta tattttcatc	7463
tgccataaaa tattgtcatg ttctatttgt ccattgccct atgtgtgtat gtattcactt	7523
gggtgctgac cacaatatth ctaactgtag aatgcaagga attgttgcca aannnnnnnn	7583
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn	7643
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnncttca tggtaaagga	7703
ggagggtatgt ccaacagaac ttgcactttt aaatagaacc acttcagaga gttgtgtcag	7763
gtgcacctca gttgtcttat cttctgccat tcttctttta cctctcacac ccatacctca	7823
gggttcaagg cctggggcct gaggactcct taataacttc agaaatgagc agctgagtgt	7883

FIG. 7F

tcogttccag ctgtctttgg gagaatggaa tggagtcaca ctcaaagata gagtggaaat 7943
 aaatcctctc ctcatccttc accccaatct taagagttag tgaggatate agtagctccg 8003
 agctgggagg taaagctcaa gttctaactg tgattaggag acctttctta caaataagaa 8063
 ttaagtgaat aaatgtgcaa acaatttctt ttatatcttt aatgaaccag agagaaatca 8123
 tgggtgccta tataaccctt gtctccaact cacttgcatt cagatctgct ttcttacatg 8183
 tgtctgccat gcacacaaac ttgtgtgcca tggaaaaggg ttgagaactg ctggtgatgc 8243
 agacagagct ttaannnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8303
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8363
 nnnnnngcag aagagaagga acattttaca gcttattggc cgaacttcac tgcgcgtagt 8423
 gtgggtcaac ttggactaca gagaatctt cctaactggt ttccctgtat tcaactctgc 8483
 tacctccaac ttggtctggt ctcacttttt gctataatag gcttttaaaa atcataaate 8543
 taccatgtgt cctctgtcca gacctctcc atggcttctt attgctcact ggatgaagtt 8603
 ccaacgagcc caggatggtt tgactcatgt ctccagcttt aactgcatec ccatacactt 8663
 cattgtctaa agctctaacc acacaggatt ttctagtcct cagaggcatg gcagctcttc 8723
 aattccgagt ttctctacac aatattgtct ctcttataaa tattttttct tgtgtccac 8783
 ctgagttgga gtcactcttt aaatctcagc taagcttata ctctcatcag tcttctctaa 8843
 ttctacctcc acgcaccaca ccattacat taaatccctt tattatatgt ttccatagca 8903
 cctactttct tcttttcagt atactcagca cacaatcaca tgtctaggat ctgttttaat 8963
 agcttggaact accaattaaa ttgcacccct tttaattgtc cattgattcc tcaagtacc 9023
 acatgccccat cttagcaaga agttcagtggt ctccctctta tagcatgtac ttctccacct 9083
 cccacaaact gccagaaagc ttacttagcc cacagggccca gtgctaggga gctaggttag 9143
 tctccagag gccctggtt ttgagcagtt gctgtctact ccggccatgc agaattcttg 9203
 gtccctccag atgtctccat ccaactgtgca aaggtaacct tgctggttcc gatccccaca 9263
 cagaccacag tgctacaaga ttacagttct tatgggtccc caacacatgc tctgtcattg 9323
 gtcccaaaag aggaccccta tgggttgatg aggtaggagg aggtccctgc cttagccaca 9383
 gctgcacaca gccagcctct tcccttctag gccctcatgt tgagcctggg acgcagctcc 9443
 taacttctt ctcttcagtt cctcttaggg ccattggtat cctgaatttc ttagtccatt 9503

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[illegible][illegible]

FIG. 7H

nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn 11183
 nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn 11243
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 nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn 11483
 gcagcatccc attatgtgaa cttgtgcttc tgaaccagta acttgagtta ctttgagcca 11543
 gtatcagtc cttatacctt agtgcaaaat taattgatca gacattctga cctggaccag 11603
 ggaaggcagg cagaagtagc agtcaagact aaagcagaaa agggagagct aattctgcag 11663
 ccagacattt cctggattga ataccctaat tagtccctca gcctttaagt gcctgagggc 11723
 caggagtaga cagaggaatg gaaagtgtga gacttctttg ttcacactct ttgcctaggg 11783
 gccagatttt gctttatgca ttaccatccg aagtccagg ccacagtga ctttgggct 11843
 tcgctatgtg gatttattta gatttacttt ttgtcctgcc atattttaat ctataagcca 11903
 aacagttttc tcattaatct tattccattt ctggaatttt tccttttca gac aca aca 11961
 Asp Thr Thr 258
 aaa aga cct gtc acc aca aca aag agg gaa gtg aac agt gct 12003
 Lys Arg Pro Val Thr Thr Thr Lys Arg Glu Val Asn Ser Ala 272
 gtgagtaagc atgattttta cttttctttc ttactttctt ttctctctca gcttgaattt 12063
 taaagtaacc actgttctat taattcatgg aaggcaactg aatagtcca gcttatagaa 12123
 tcttctctgt tggtagcatt tcagcggaagc ctggttctta gccccagAAC aatcatgcca 12183
 tcttttctgc ggtctatatt cctaagcact cctagatgat actgcactgg acctctggtc 12243
 tcacatagtt agaaacagag ttaaaatcga acagcaaa gaagatatto aactgcgatg 12303
 caattgacaa tggatgtttt tgcaacaaac aatgattaag aagtacattg ttgtgggctc 12363
 tgaagtcaaga gtaatatggg aaaaacacaa gtctcttcat gaggttgaca ggtttggagc 12423
 tggaaatctgt ggagaggagaa ggatatgatc taggggtcag aagaagtggg ttactaaaat 12483
 cattaagcct ggttggatga aaagcttaga ctcaggggaa gcagnnnnnnn nnnnnnnnnn 12543
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 12603
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FIG. 7J

caacactctc ttgottaate tgtaagacte tctccccac tcataccttt ttatttttcc 14343
 totgcattgt acacacaate tataccacte ttaagcacat gattacagcg ttattttctg 14403
 gctgettcta tgtgtctata ttttaggtcc acctgggtcaa tataataaag tgggatatta 14463
 gtgttaatgc aactatatgg tatttgatat ttgtctttct gtcggttat caatgtttct 14523
 tatagnnnnn nnnnnnnnnn nnnnnnnngg tgtctgattt tgaccaaatt tgactaaata 14583
 cnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnngt tgaagtctatc aactcaaaaa 14643
 agaataacct acaacaataa caagtttcag aacatttttt aaattactga ttttatgagn 14703
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnngaatt ccattgccta 14763
 gaaattgccca tgggtaagat ttttaatttg ctacggccca gacagctcag ggctttgaca 14823
 ttccccaccc cattctctgc catccagtt ctatctctac ccaaaaccat ccattatgag 14883
 gagagtgtac agctctaggc tgcccgaggc ccatcccgca ctctcatttt gtgactggcg 14943
 atcttggggg atggagcttt gggacttagc ctggacatgt cccttgcatg tacttcttac 15003
 aagactttta ttcagatgaa tattttccct tccaaactaa gaagcacagg gcttgctggt 15063
 tttgcttcac taaccagcaa ctgaagcaag acctgacttg tgaatatgcc taatagagtt 15123
 cagtattagc gctgtttcac catttctcgg atctcttgcc tttgtgcaca tgatagaatt 15183
 gcacttctct gtgattaatt ttagttagg tgtggtcatg taactgcgtt tggtaatta 15243
 aatgtaagca taagtgtgc gtgttatttc tgggtagaag atgtaaggt tggcatatgc 15303
 tttgccatat tttctttatc catctggcat ggtaaccagt aacattctag tagtaattg 15363
 ctccatcagt ctacgtctct gagtactaa aattgacaga gtcccctgct gacctcaat 15423
 gtacatggaa catgaacaag aataagcttt tgttttttat attgagattt tggagttgtt 15483
 tgttctaca gcattaccta gtttactcta atacaacatg gaaaaaactg gaacctataa 15543
 taaatagacc ctacgttgcc atttaaactt ctagtcttga ggaataataa tgtggggaaa 15603
 tactttctat ataataaaaa aatagaaaat tgcaaaaataa aaatatactt atgtatcatt 15663
 catgtcctat taaaaatgtt atttatagac tcaccatatt ccttctctcc agaaaaatag 15723
 aagtaaaaa atgaaaatgc ctgtaatcat gtttttgat tatggaatca agtattgctt 15783
 tttactttta tgtttcttga atttttgttg tacttcaact catttttgag tgccctgatg 15843
 tattactttc aaaaagaaga agaatacttt ctgaagccat ttcaaccata cccactcacc 15903

FIG. 7K

tctctagatc ccagtaacca aatacattat ataggactct tcatcagtc ttatcaagtt 15963
 taggaagggc gatgctatac cttctttaa ggacacctac caatgtctta gttgccttcc 16023
 aaagactcct agcacagcta aatgtgatgg atatgctcta aggatataag agctgaagtg 16083
 acttgcataa ggtcatatca taacttactg ttagaaatgg agctagaact cagacccact 16143
 gagtccttgt ctgtgacaca ctgcccttcc catttgggga agttgttctt gtatctaact 16203
 ttatctgtgc tactatttgg gcctagccat tctccctctt atgcagacaa gcagataaac 16263
 agtaaaactt taggagtgga ttatgatacc atagatatat atcatctatc ctttacaaaa 16323
 tagttattac agtcatcaag ccttggttag agtttacaga ccatgtatcc tagctannnn 16383
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnntgaaaca 16443
 gtagcagacc aaaagaagtc atgattccca gcatagtgct nnnnnnnnnn nnnnnnnnnn 16503
 nnnnnnnnnn nnnnaaacct gtattaagtt tctgttattt gcaagaccct gtcagttagg 16563
 ccatgtggga actagaagga tgaatttacc agtcatccaa gattcttaca attaagtatt 16623
 accgataagg tactcaagaa acagtcttca ttcacataat ttgggttaaa acaaaaagaa 16683
 gccagcttcc tatatacttt tgggtccagtc ttacgtttt ttgttttgtt ttgttttgtt 16743
 tcatgagtat cccgacttcc ttctaagaac ttccacctga gaactgacca cagcgtcagc 16803
 attccacatg ggtgtgttcc ctttcccttt tccatttcca gtggtttcca atttcttttt 16863
 cttttggcac tataaacctt tcgcaaagga aatattagac agaactccta catgtcaagc 16923
 aaattaaaat agtggtgaaa ttagagtgga ggacataatc accctatcat ataggctatt 16983
 tgtccatata atatttgtcc ctacaaaggc ctctaaggnn nnnnnnnnnn nnnnnnnnnn 17043
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17103
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17343
 nnnnnnnnnn nnnnnnnnnn nnnctctaag atacctgtg cttcttggaa catatttggga 17403
 aaatcatgta gctctcaaat tatccctatg tcctgaagcc caccctacca tcaatcctca 17463
 gaaataccca acccatgtca ggcaacttca cactttcttt cttcaggcag cacagttgtc 17523

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FIG. 7L

tcagggaggg aggagagtgc tattagcaag aggagtcaact aacagcttca ctcacctgtg 17583
 cccatgaatt tttaatgggtg tgaaaagtct gtgtattttt tatggttctc tatggctcat 17643
 ataagaggga caaacaatac atgaaagtcc agagatgggg acaaatatca ctttaagctg 17703
 gggataatca gggagaaga aagttttcat ggagaagggtg acttttgaat caggaagaaa 17763
 tggaacacgc aaactcttct agatagagga gacactaaca ggaaaggcag agaggcagga 17823
 aggtgtggga aagtgcacgt gaccccgctc agagagaaag ccagggtgtg gataaggggg 17883
 aaagactgtt agggcatgtg ttgtaaacca ctaattccag gcaaaagtta gattttactt 17943
 actaagcaag agtgcttcag ttagatccta gcaggaaatg gagggtatgc ttagaagagg 18003
 taactgaggc aagtttaatt tataaagggtg tgtgcagcat taagggaac cagcaaggga 18063
 tactgagcat gccaggatgc aagagcaggc agggaagggtg actattccta ggtctgaagg 18123
 agaaggggga gggagcagtt ccagaaccc tagtaaaaat ggcaatgaga aagggtccatc 18183
 tggcaggacc tatggtcttt aacagaggga caaagtcaac ccacaacttg tctgggagggt 18243
 tgctgaggaa tagatacccc aacctctctc tcaacccact gcaacactct ttttcccta 18303
 gactgagccc agtcaaagac agaggggagga gccagtgat gcagtctgca atgtcatcat 18363
 cctggagcat gaatatagtg cagcagggtg aataatgagt ctgcaggaa taatagaaat 18423
 atctgacaca atagggaact ataaagggtt ttgaatagga gaggcccttg aaatgtgctc 18483
 caatattact gaactatgtg tggcccaaag aatggaagag gaacagctct tgcfaataggt 18543
 ctgaggagag aagctgaaga cttggactag ggcaatggta aaaactgttg aaagaagttt 18603
 taaatgaaaa gttttaaac atcgcgcttc cagctagatg aactttttta aaaaaattag 18663
 ttctcactc aaattttggg gaggttatat attttctaata cataaaaaat gatttttctt 18723
 atttgtgggc ttttctccc ag atc tga acctgtggtc ttgggagcca gggtagacctg 18781
 Ile 273
 atatgacatc taaagaagct tctggactct gaacaagaat tcggtggcct gcagagcttg 18841
 ccatttgac ttttcaaag cctttggatg acccagcact ttaatctgaa acctgcaaca 18901
 agactagcca acacctggcc atgaaacttg ccccttcaact gatctggact cactctgga 18961
 gcctatggct ttaagcaagc actactgcac ttacagaat taccocactg gatcctggac 19021
 ccacagaatt ccttcaggat ccttctgtct gccagactga aagcaaaagg aattatttcc 19081

FIG. 7M

cctcaagttt tctaagtgat ttccaaaagc agaggtgtgt ggaaatttcc agtaacagaa 19141
acagatgggt tgccaataga gttatttttt atctatagct tcctctgggt actagaagag 19201
gctattgaga ctatga 19217

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FIG. 8

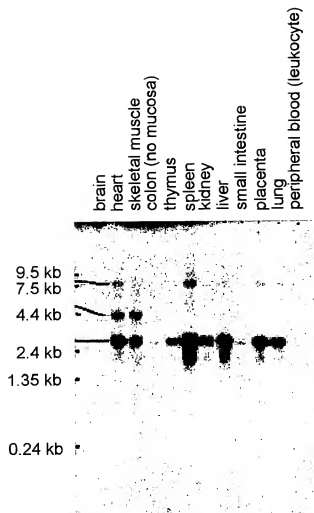
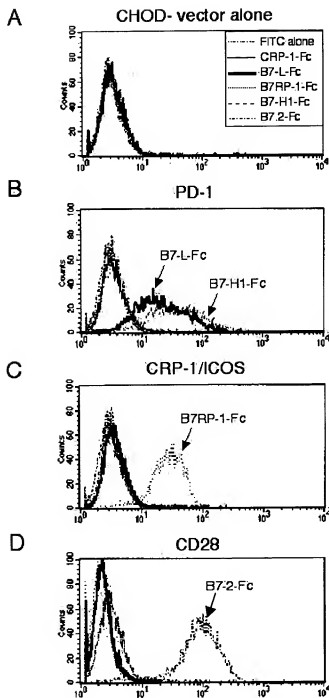


FIG. 9



Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

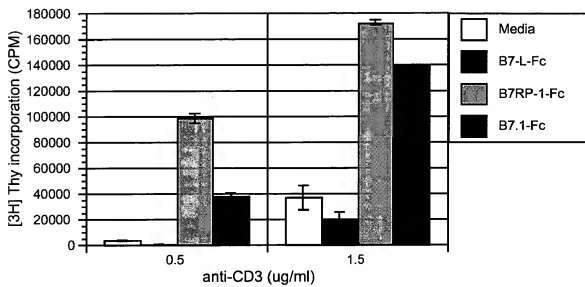


FIG. 11

